The Security-Stability-Sustainability Nexus
Environmental Considerations

NDIA Environment, Energy and Sustainability Symposium

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AEPI Mission / VAIA Operating Concept

The mission of the Army Environmental Policy Institute is to assist the Army Secretariat in the development of proactive policies and strategies to address environmental issues that may have significant future impacts on the Army

Visualize
- Scanning the horizon for environmental issues and forecasting probable impact on the Army in the future

Analyze
- Gathering the best environmental intelligence from government, industry and academia or develop internally

Inform
- Providing sound recommendations that Army leaders can incorporate into planning and policy making decisions

Act
- Building a bridge between policy and implementation through pilot programs, strategic plans, policy recommendations

AEPI
Army Environmental Policy Institute
"Connecting Today's Army to Tomorrow's World"

U.S.ARMY

Topics

- ➢ **Strategic Frameworks** – Ends-Ways-Means

- ➢ **Environment Considerations** – State Fragility

- ➢ **Stability Operations** – Fostering Sustainability

- ➢ **Peacetime Engagement** – Conflict Prevention

"America is now threatened less by conquering states than we are by failing ones" (National Security Strategy, 2002)

Terms

Security – *freedom from fear, want, and deprivation* (1)

Stability – *capacity to manage effectively and peacefully and adapt to change, while addressing structural underlying factors associated with instability and external stabilizers* (2)

Sustainability – *capacity to meet the needs of the present without compromising the needs of future generations* (3)

Environment – *complex of physical, chemical, biotic factors that act upon an organism or ecological community at any point in the life cycle and ultimately determine its form and survival* (4)

Sources: (1) Renner, *Inventory of Environment and Security Policies and Practices*, p. 11, 2006; (2) Adapted from UK , *An International Strategy to Manage Risks of Instability and Improve Crisis Response, 2005*; (3) Former Sec. of Army Francis Harvey; (4) Botkin and Keller, *Environmental Science – Earth as a Living Planet*, 1995.

The Nexus Articulated

"Humanity will not enjoy security without development, it will not enjoy development without security, and it will not enjoy either without respect for human rights" … "all of our efforts to defeat poverty and pursue sustainable development will be in vain if environmental degradation and natural resource depletion continue unabated."

Kofi Annan

United Nations Secretary-General's Report
2005 World Summit

Source: *Human and Environmental Security – An Agenda for Change*, ed. By Dodds and Pippard, 2005
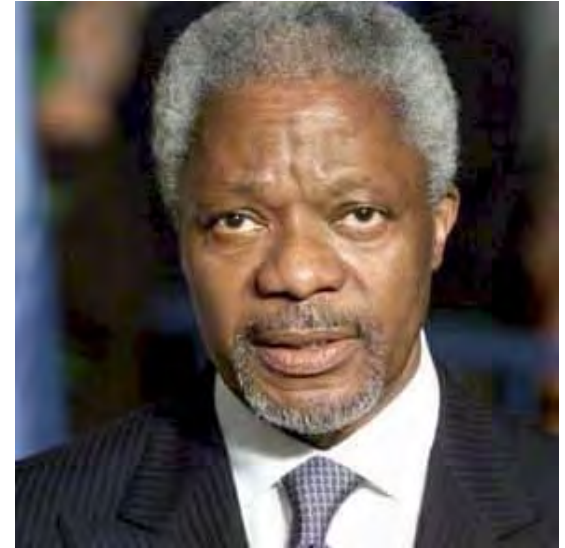
The Nexus Depicted
Pillar Framework

Regional & State Stability — **Ends** — **S**TABILITY

Social — Communities
Economic — Development
Institutional — Governance
Environmental — Natural Resources

Ways — **S**USTAINABILITY
[Dimensions or Pillars]

Traditional & Non-Traditional Security — **Ends** — **S**ECURITY

Source: Adapted from Whelan, 2008

Whole of Government "Plus" Framework
the Means

Defense
Dept of Defense

Diplomacy
Dept of State

Development
US Agency for International Development

+

Other Departments
e.g., Energy, Agriculture, Commerce

+

External Actors

Donor Agencies

International Government Organizations

Non- Government Organizations

Private Organizations

*Major Sectors of National Power (*3Ds*)*

Whole of Government Integration

Whole of Government Plus Framework – the Means

Source: Hearne, Pre-publishable Paper Submitted to George Marshall Center, 2008 [Adapted from Miklaucic and Baltazar, 2006]

Improved Integrated Planning/Execution
Addressing Non-Traditional Threats

➢ **On Future Threats**: [next 20+ years]
"certain pressures – population, resource, energy, climate, economic, and environmental – could combine with rapid cultural, social, and technological change to produce new sources of deprivation, rage and instability"

Robert Gates
Secretary of Defense

➢ **On Engagement**:   *"the military is in a supporting role to civilian agencies "*

➢ **On Resourcing**: *"American civilian institutions of diplomacy & development have been chronically undermanned and underfunded for far too long"*

➢ **On Integration**:   *"the challenge we face is how best to integrate these tools of statecraft with the military, international partners, and the private sector".*

Environment and Security

Adm. Dennis Blair
Director of
National Intelligence

"Climate change, energy, global health and environmental security are often intertwined, and while not traditionally viewed as „threats"to U.S. national security, they will affect Americans in major ways."

" … the greatest danger may arise from the convergence and interaction of many stresses simultaneously … such a complex and unprecedented syndrome of problems could cause outright state failure, or weaken pivotal states counted on to act as anchors of regional stability."
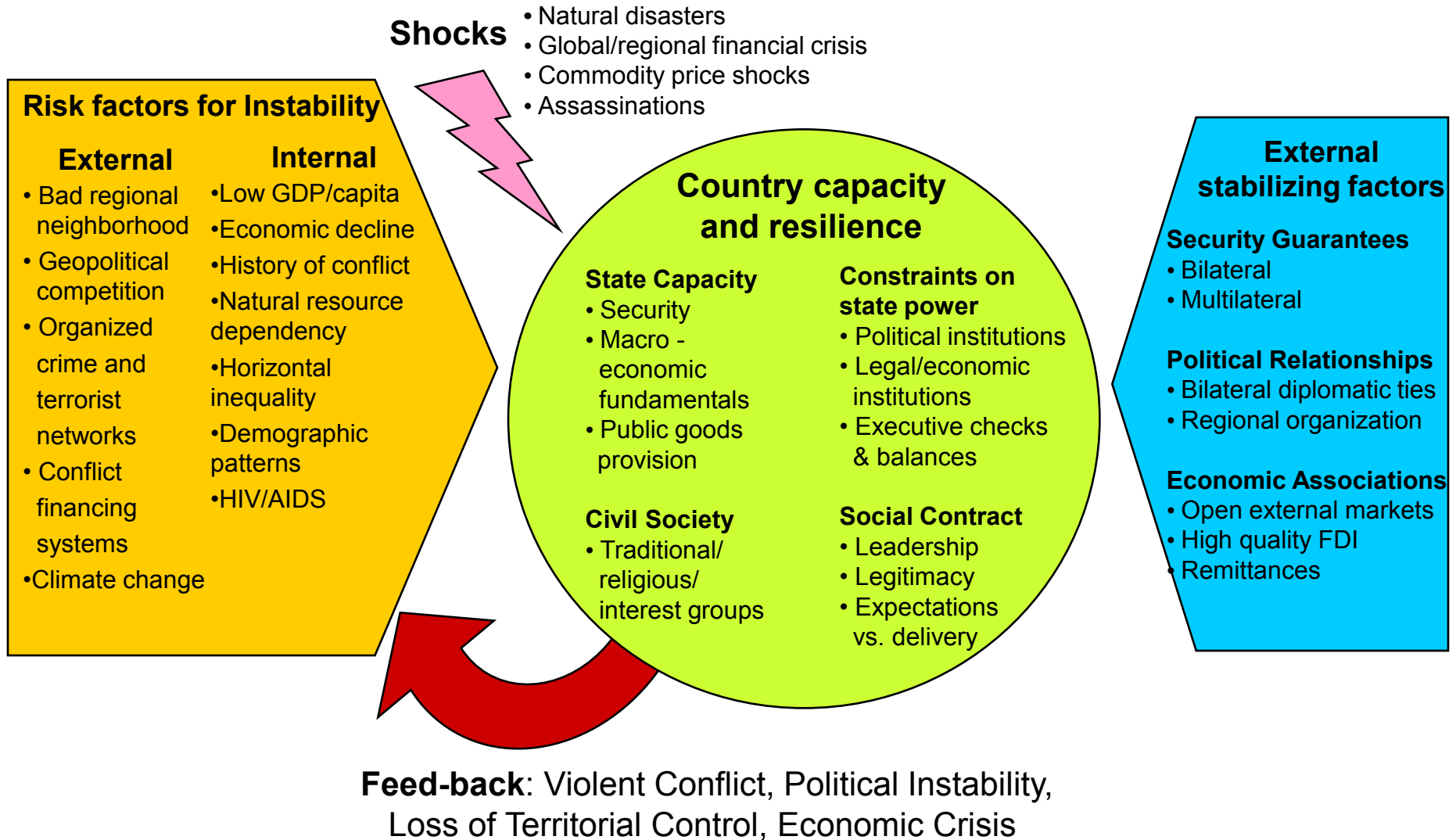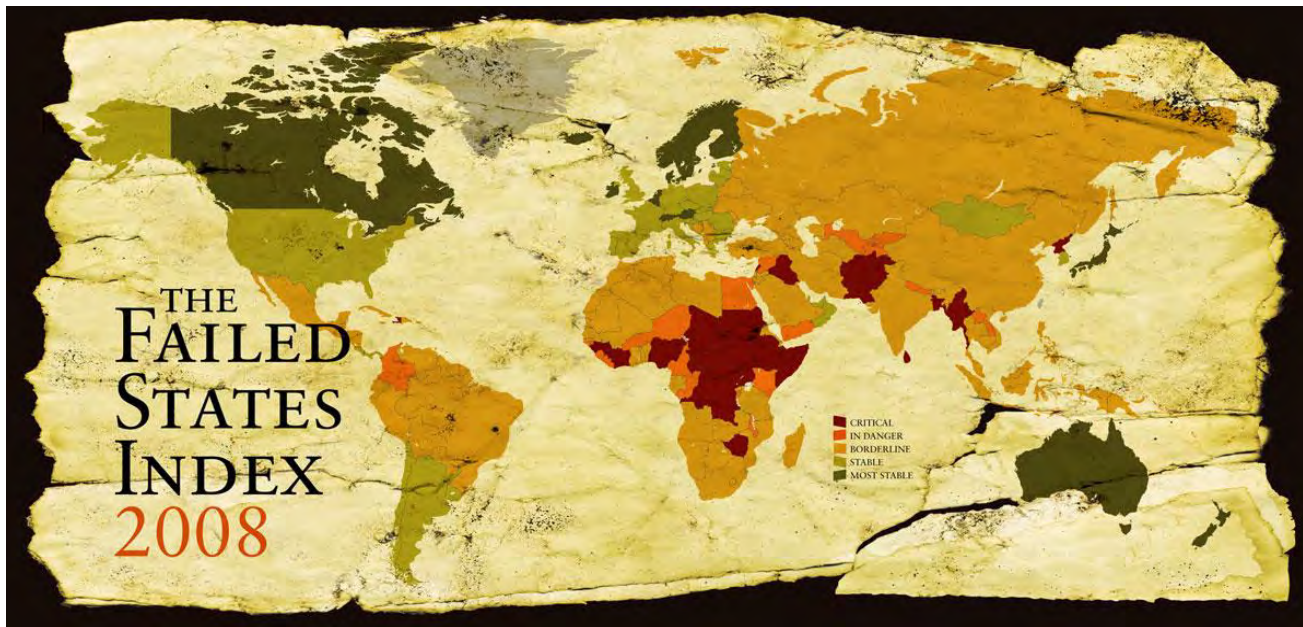
Instability and Fragile States (FM 3-0)
Trends Affecting Ground Force Operations

➢ **Globalization** – underscores disparities that can spawn instability

➢ **Technology** – advanced technology available to unstable states

➢ **Demographic Changes** – population growth in Africa

➢ **Urbanization** – overcrowded megacities near geological fault lines

➢ **Resource Demand** – competition for water, gas, and oil – are finite

➢ **Climate Change/Natural Disasters** – destabilizing, migration, disease

➢ **Proliferation Weapons of Mass Destruction** - catastrophic attacks

➢ **Failed or Failing States** – safe havens for adversaries

"A fragile state is a country that suffers from institutional weakness serious enough to threaten the stability of the central government"
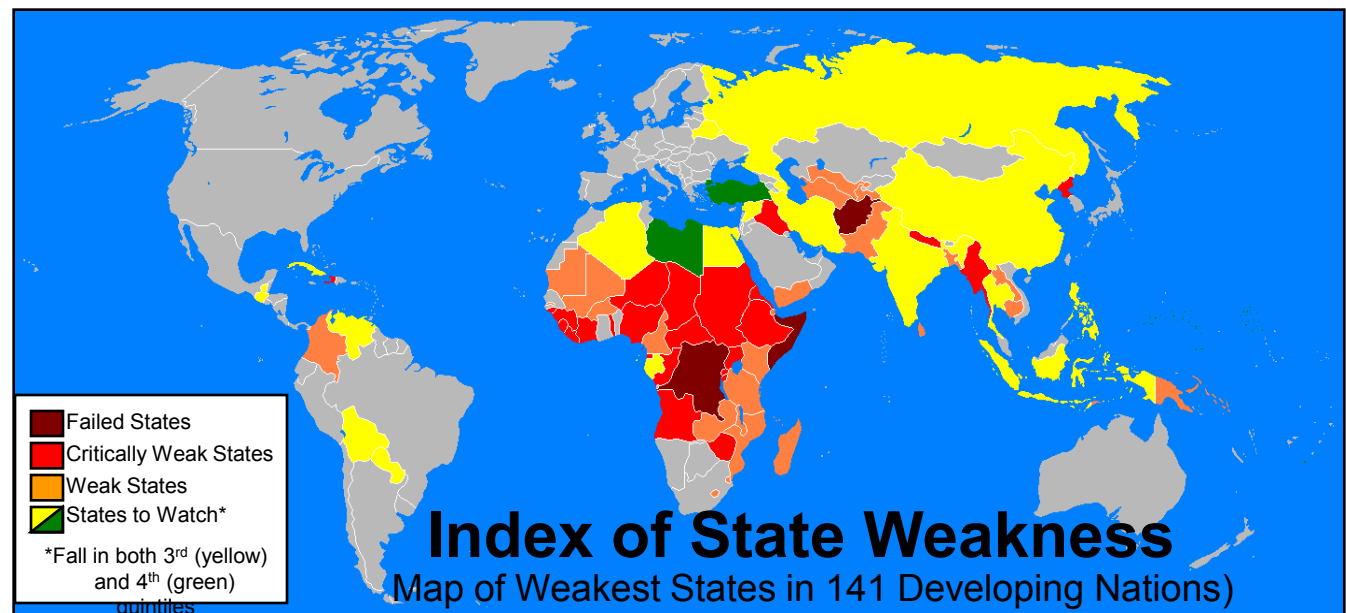
Systems Framework for Instability

Shocks
- Natural disasters
- Global/regional financial crisis
- Commodity price shocks
- Assassinations

Risk factors for Instability

External
- Bad regional neighborhood
- Geopolitical competition
- Organized crime and terrorist networks
- Conflict financing systems
- Climate change

Internal
- Low GDP/capita
- Economic decline
- History of conflict
- Natural resource dependency
- Horizontal inequality
- Demographic patterns
- HIV/AIDS

Country capacity and resilience

State Capacity
- Security
- Macro-economic fundamentals
- Public goods provision

Constraints on state power
- Political institutions
- Legal/economic institutions
- Executive checks & balances

Civil Society
- Traditional/religious/interest groups

Social Contract
- Leadership
- Legitimacy
- Expectations vs. delivery

External stabilizing factors

Security Guarantees
- Bilateral
- Multilateral

Political Relationships
- Bilateral diplomatic ties
- Regional organization

Economic Associations
- Open external markets
- High quality FDI
- Remittances

Feed-back: Violent Conflict, Political Instability, Loss of Territorial Control, Economic Crisis

Source: UK, 2005 – *An International Strategy to Manage Risks of Instability and Improve Crisis Response*

Indices of State Fragility

Source: Foreign Policy and Fund for Peace Conflict Assessment System Tool (CAST), 2008

Rankings	FSI	ISW
Somalia	1	1
Sudan	2	6
DRC	6	3
Zimbabwe	1	8
Afghanistan	7	2
Iraq	5	4

Failed States
Critically Weak States
Weak States
States to Watch*

*Fall in both 3rd (yellow) and 4th (green) quintiles

Index of State Weakness
Map of Weakest States in 141 Developing Nations)

Source: Rice and Patrick, 2008 – Reproduced with Brookings Institution Permission

Africa - Most Vulnerable

Africa Climate Zones

- World's hottest continent and the 2nd driest
- 20 of 30 countries - fastest growing populations
- By 2050 Africa will have the fastest growth rate in the world – twice rate of any other region
- Rapid urbanization – highest rate for decades
- World's highest rate of deforestation
- Land degradation leading to desertification
- Estimated 65% of agricultural land is degraded
- Emits only 4% of global CO_2 emissions
- African biodiversity – opportunity for proactive intervention to address decline and hotspots
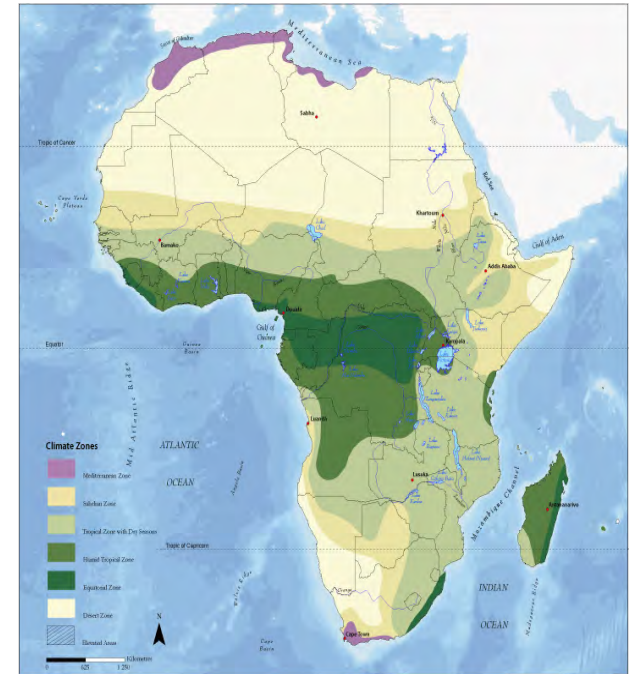
Source: Africa: Atlas of Our Changing Environment , UNEP, 2008

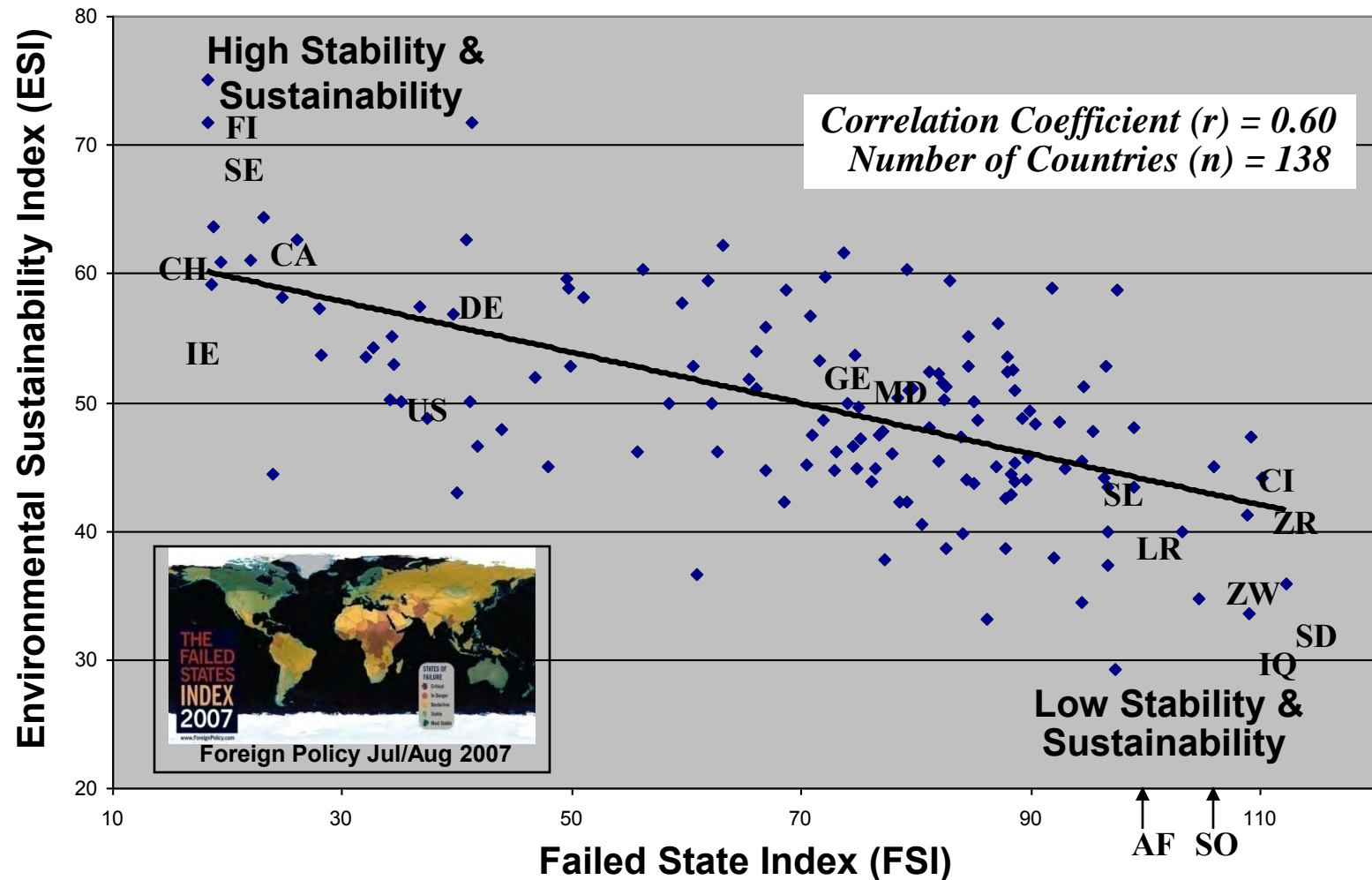# *Comparison of Indicator Sets and Indices*
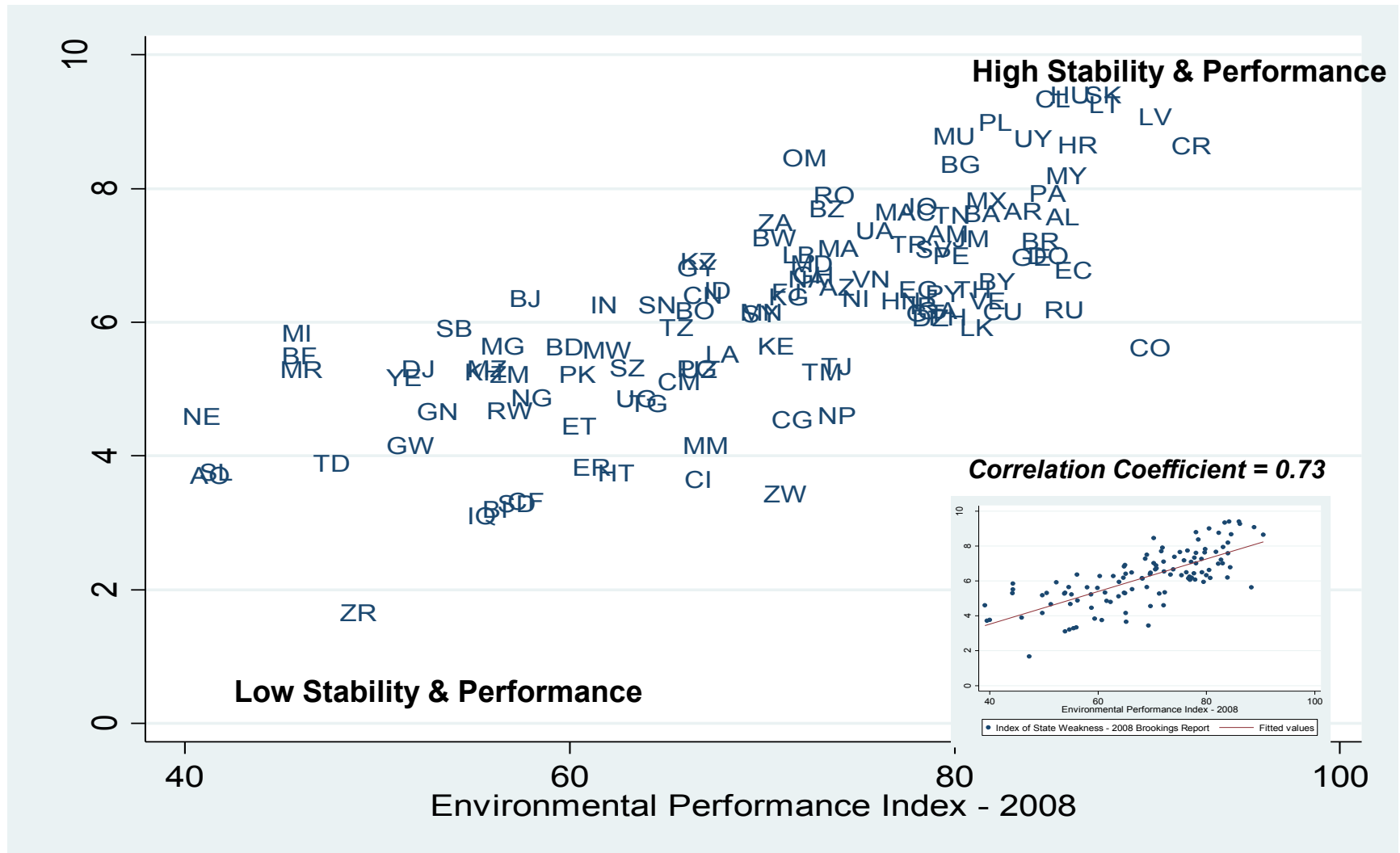## Notionally Represented by Sustainability Pillar

Source: Hearne, Pre-publishable Paper Submitted to George C. Marshall Center, 2008
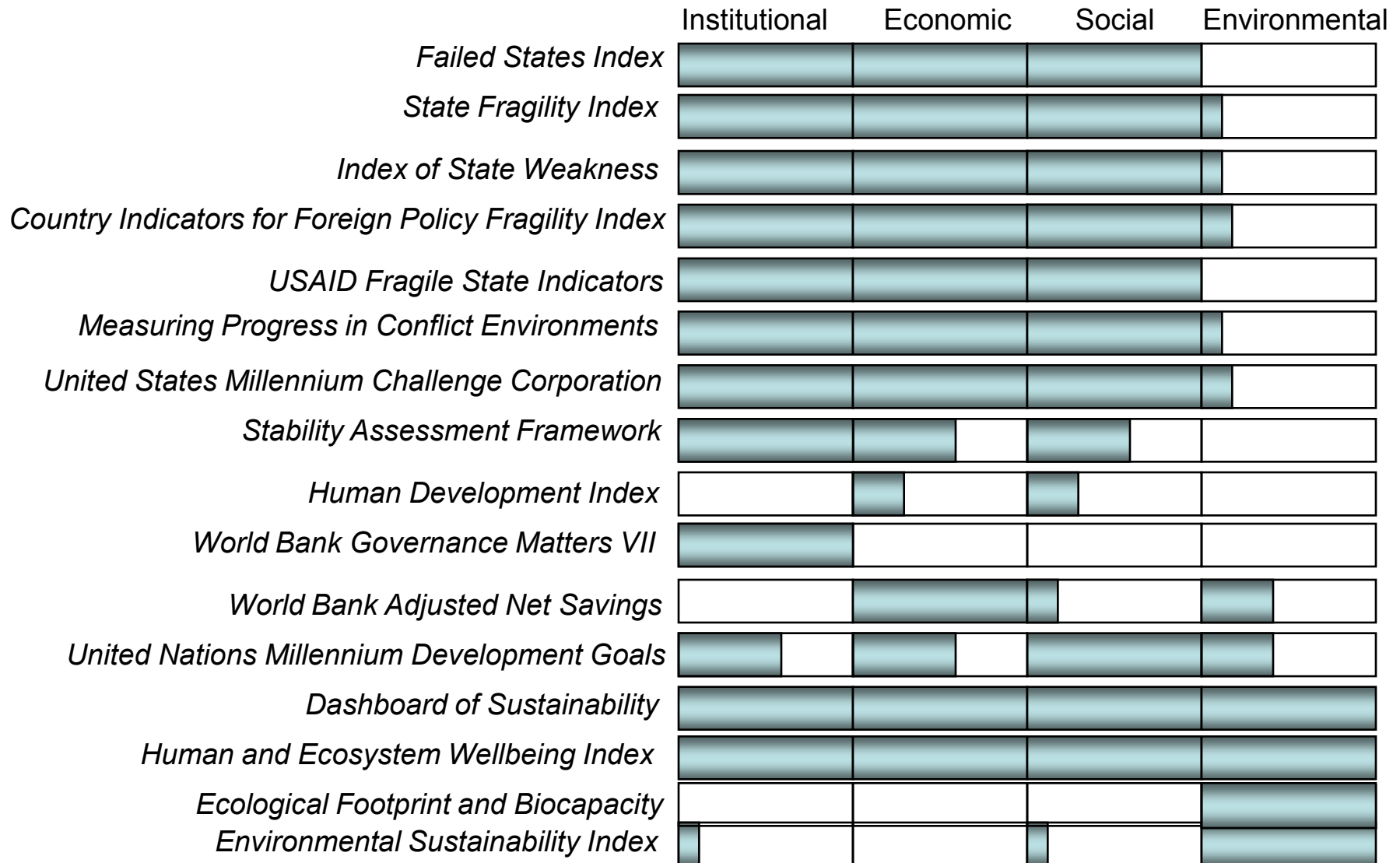
Environmental Sustainability & State Fragility
NATO Advanced Research Workshop Presentation – June 2007

Source: Hearne, 2008, Environmental Change and Human Security, Springer Press
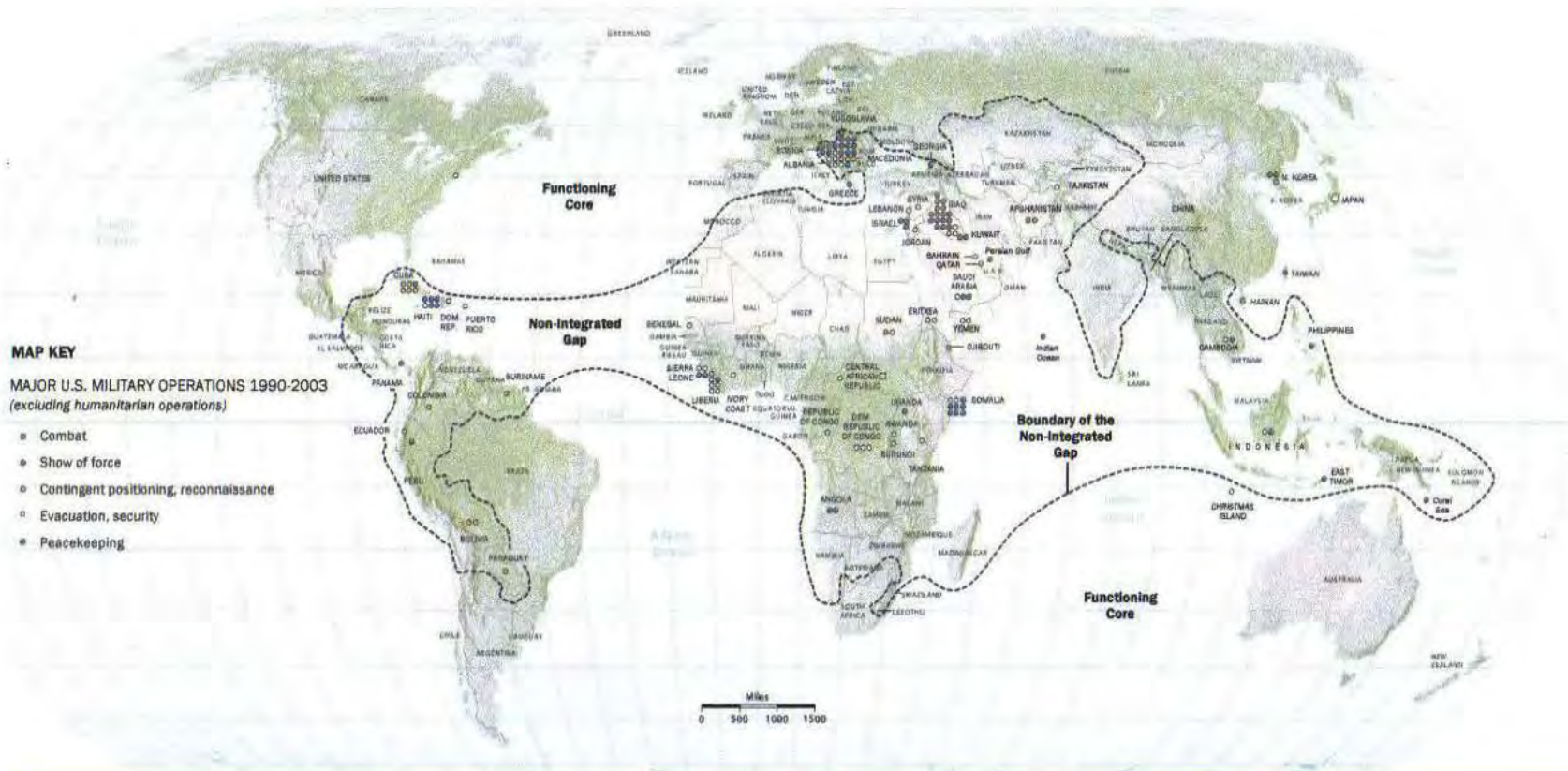
State Weakness & Environmental Performance

Major US Military Operations: 1990-2002
Non-Integrated Gap – Disconnected from *Globalization*

The Pentagon's New Map:
War and Peace in the Twenty-First Century

Non-Integrating Gap: Area envisioned to be removed from the politically stable, economically integrated countries of globalization's functioning "core"; characterized by repression, poverty, disease, and chronic conflict.

Source: Barnett, *The Pentagon's New Map*, 2003

Response to Instability and Fragile States
The Fragile States & Stability Operations Frameworks (FM 3-07)
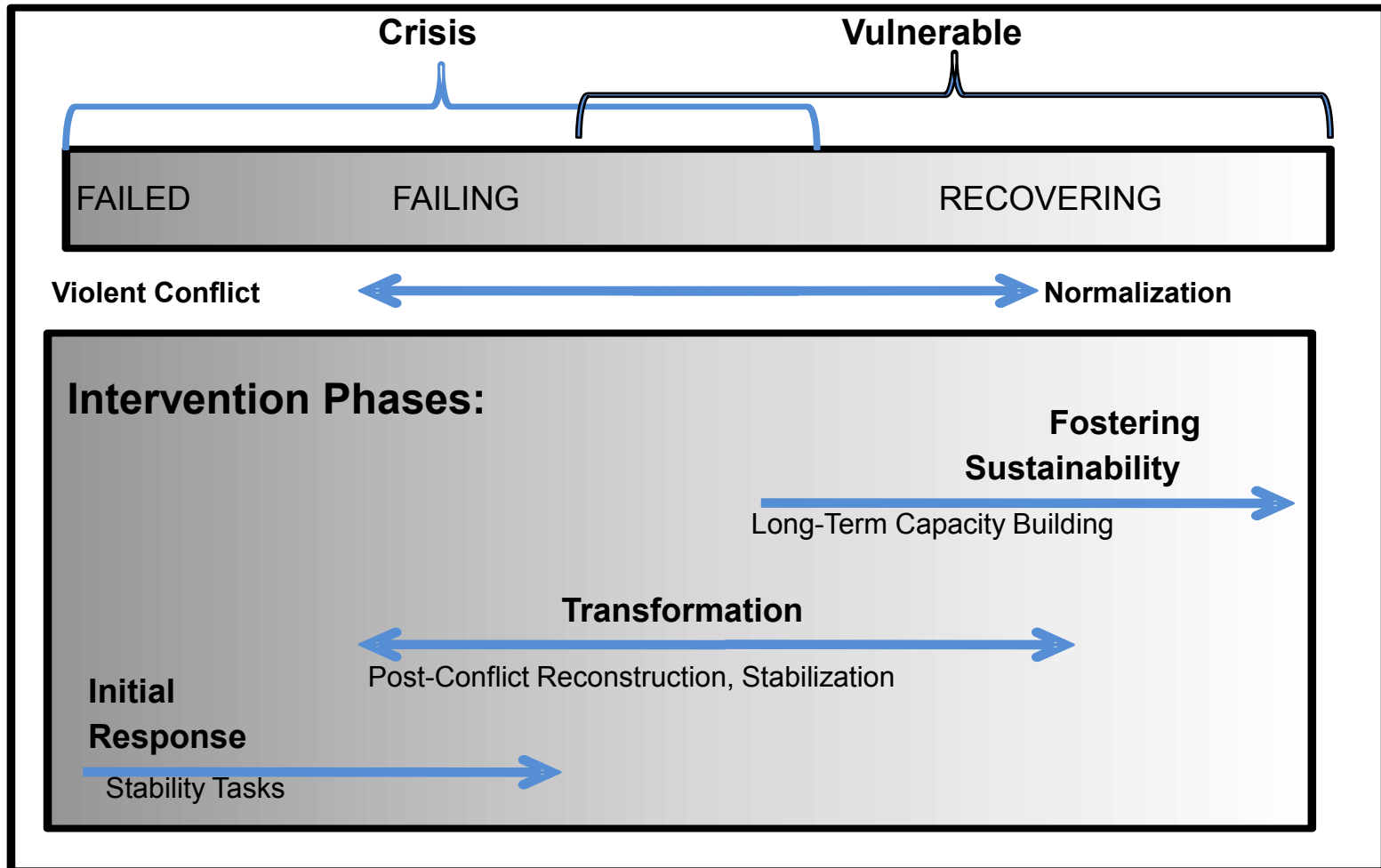
Stability Operations - Basic Human Needs

"**Stability Operations** encompass various military missions, tasks and activities conducted outside the United States in coordination with other instruments of national power to maintain or re-establish a safe and secure environment, and to provide essential government services, emergency infrastructure reconstruction, and humanitarian relief." [Source: Joint Pub 3-0]
.

Core US military mission comparable to combat operations

- Conducted to help establish/maintain order **across the full spectrum of operations** - peace through conflict

- Best performed by indigenous, foreign, or civilian professionals but **military must be prepared to perform tasks** when civil authorities cannot

- SOs are typically **lengthy endeavors**

Importance of Environment in Stability Ops
Addressing Basic Human Needs

Physiological/Survival

➢ Clean air and fresh water
➢ Sanitation and waste disposal
➢ Identifying disease vectors and vaccines
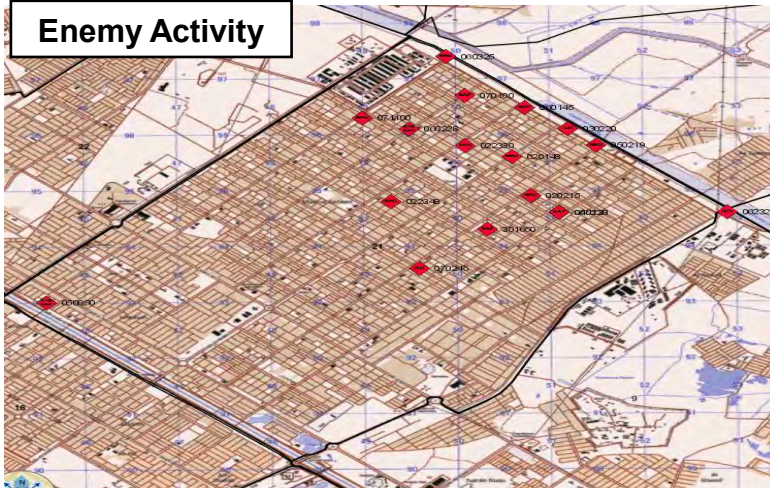➢ Uncontaminated food supply

**AEPI Foresight Bulletin
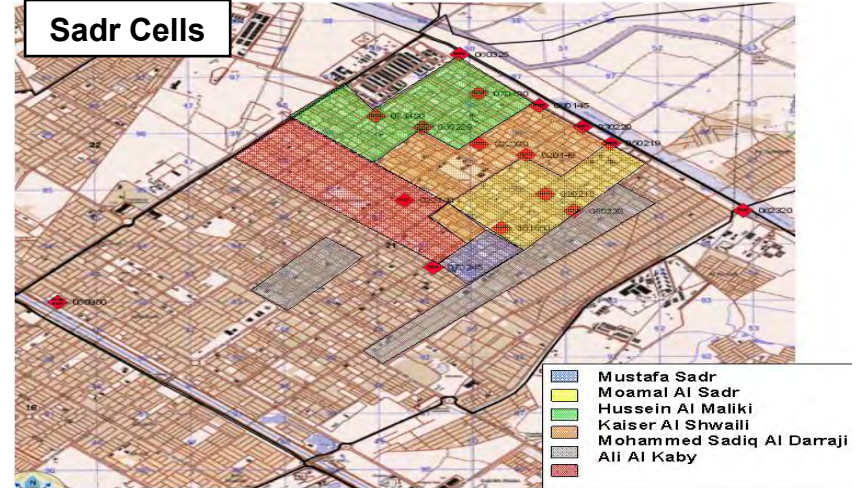Stability Operations (Aug 06)**

Basic Services & Insurgency - Baghdad

$$\text{Visible Progress} \quad f \text{ Local} \left(\frac{\text{Sewer+Water+Electricity+Garbage}}{\text{Employment+Governance}} \right) = \text{Deny Insurgent Influence}$$

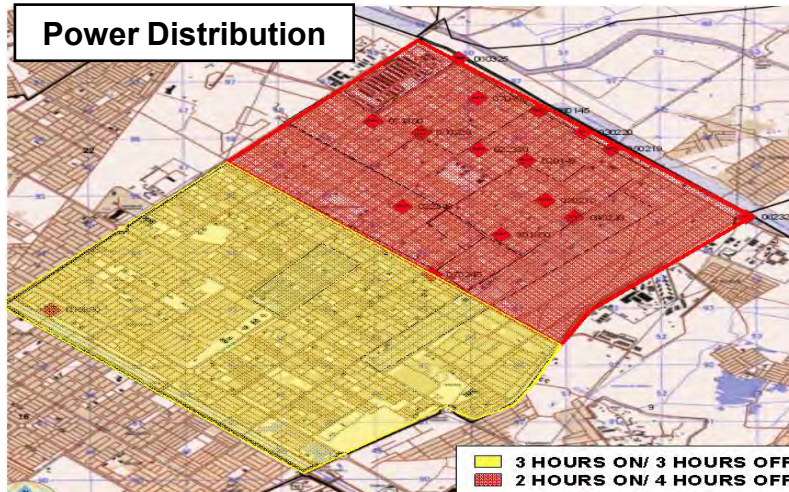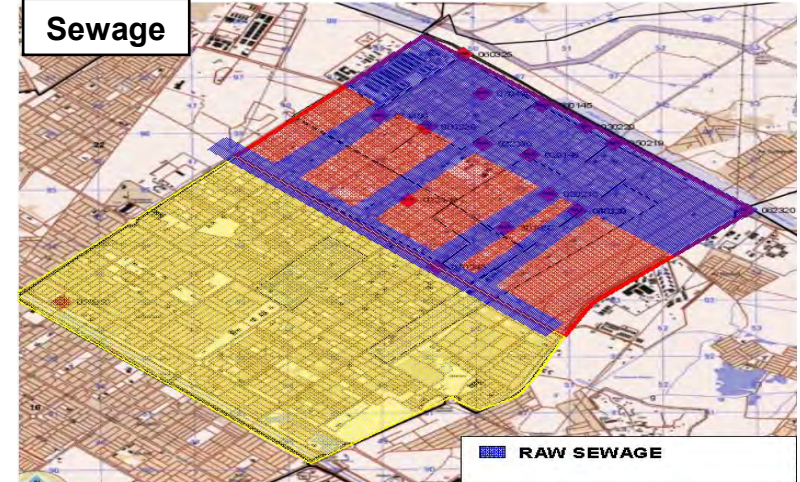**Enemy Activity**

Sadr Cells

Mustafa Sadr
Moamal Al Sadr
Hussein Al Maliki
Kaiser Al Shwaili
Mohammed Sadiq Al Darraji
Ali Al Kaby

Power Distribution

3 HOURS ON/ 3 HOURS OFF
2 HOURS ON/ 4 HOURS OFF

Sewage

RAW SEWAGE

Addressing Basic Human Needs

Maslow's Hierarchy

Self-Actualization → Challenging projects, opportunities for innovation and creativity, learning and creating at a high level

Ego (Esteem) → Important projects, recognition from others, prestige and status

Social (Belonging) → Acceptance, be part of a group, identification with successful team

Safety/Security → Physical safety, economic security, freedom from threats

Physiological → Physical survival needs: water, food, shelter, warmth, sleep, etc.

Environment
[Natural Resources and Ecosystem Services]

Sources: Adapted from Maslow, 1943; Butts as reported by Damonte, 2006

Stability Operations - The Bottom Line
Promote Stability and Foster Sustainability

Combat [kinetic] **operations win the battle …**

Agribusiness Development Team – Afghanistan
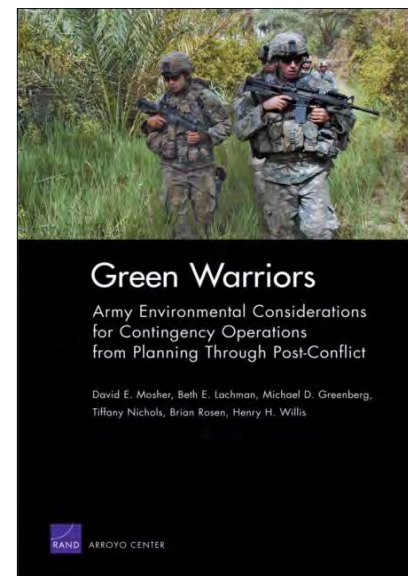
… but addressing human needs helps win the war

Source: Leppert, Sustainability lecture on *RC-East Agribusiness Development Teams*, Jun 08

RAND Green Warriors Report – Sep 2008
Environmental Considerations in Contingency Operations

➢ **Consider environmental impacts early and often**:
- ➢ Protect Soldier health and safety - minimize risk
- ➢ Gain tactical and strategic benefit in meeting objectives
- ➢ Improve community relations, e.g., sewage, water, trash

➢ **Recommendations include**:
- ➢ Fill gaps in policy/guidance – DoD-wide policy
- ➢ Improve pre-deployment/field environmental training
- ➢ Invest in skilled personnel and innovative technologies
- ➢ Integrate strategic environmental considerations in plans

➢ **Encourage Sustainable Environmental Practices:**
- ➢ Reduced logistics tail - fewer convoys and Soldiers at risk
- ➢ Safer and more efficient base camps - less waste
- ➢ More stable and sustainable country upon re-deployment

Green Warriors
Army Environmental Considerations for Contingency Operations from Planning Through Post-Conflict

David E. Mosher, Beth E. Lachman, Michael D. Greenberg, Tiffany Nichols, Brian Rosen, Henry H. Willis

RAND ARROYO CENTER

Tactical Hybrid Power
National Training Center
FT Irwin, CA

Sustainability and Full Spectrum Ops
goinggreen = armystrong

"Sustainability is a national security imperative in a world of decreasing natural resources and increasing demand. The **Army is building green, buying green, and going green** in order to ensure that soldiers have the resources they need to accomplish their mission in the United States and globally"

(Pete Geren, Secretary of the Army)

Tactical Hybrid Power
National Training Center
FT Irwin, CA

"Triple bottom line" Plus
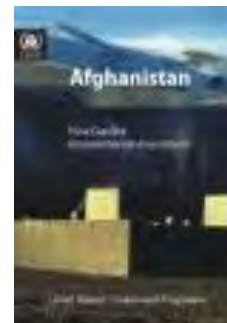### Mission, Environment, Communities + Economy

Sources: (1) *The Army Strategy for the Environment – Sustain the Mission – Secure the Future,* 2004;
(2) *Sustaining the Mission, Preserving the Environment, Securing the Future,* AUSA Torchbearer, 2007

Post-Conflict Environmental Assessments
United Nations Environmental Programme

Kosovo

UNEP in Afghanistan:
- Phase 1 (2000-2003) – Assessment
- Phase 2 (2003-2007) – Capacity Building
- Phase 3 (2008-2010) – Implementation

Reported UNEP Achievements:
- Environmental Institutions and Coordination
- Environmental Law and Policy
- Environmental Impact Assessment and Pollution Control
- Environmental Information and Education
- Community-Based Natural Resources Management
- Network of Protected Areas
- Multilateral Environmental Agreements (MEAs)

Source: http://postconflict.unep.ch/publications/UNEP_in_Afghanistan.pdf

Afghanistan

Iraq

Sudan

Source: http://postconflict.unep.ch/;

Environmental Security Discourse
Contending Pathways – Cooperation vs Conflict

A

Fear of depletion → Cooperation ← Differentiated opportunities

Awareness

Governance

Distribution Of benefits

D

Scarcity

Technological change

Resource axis

Abundance

Lack of trust Between users

Hegemonic motives

Lootability

B

High uncertainty of future benefits → Conflict ← Shadow market For loot

C
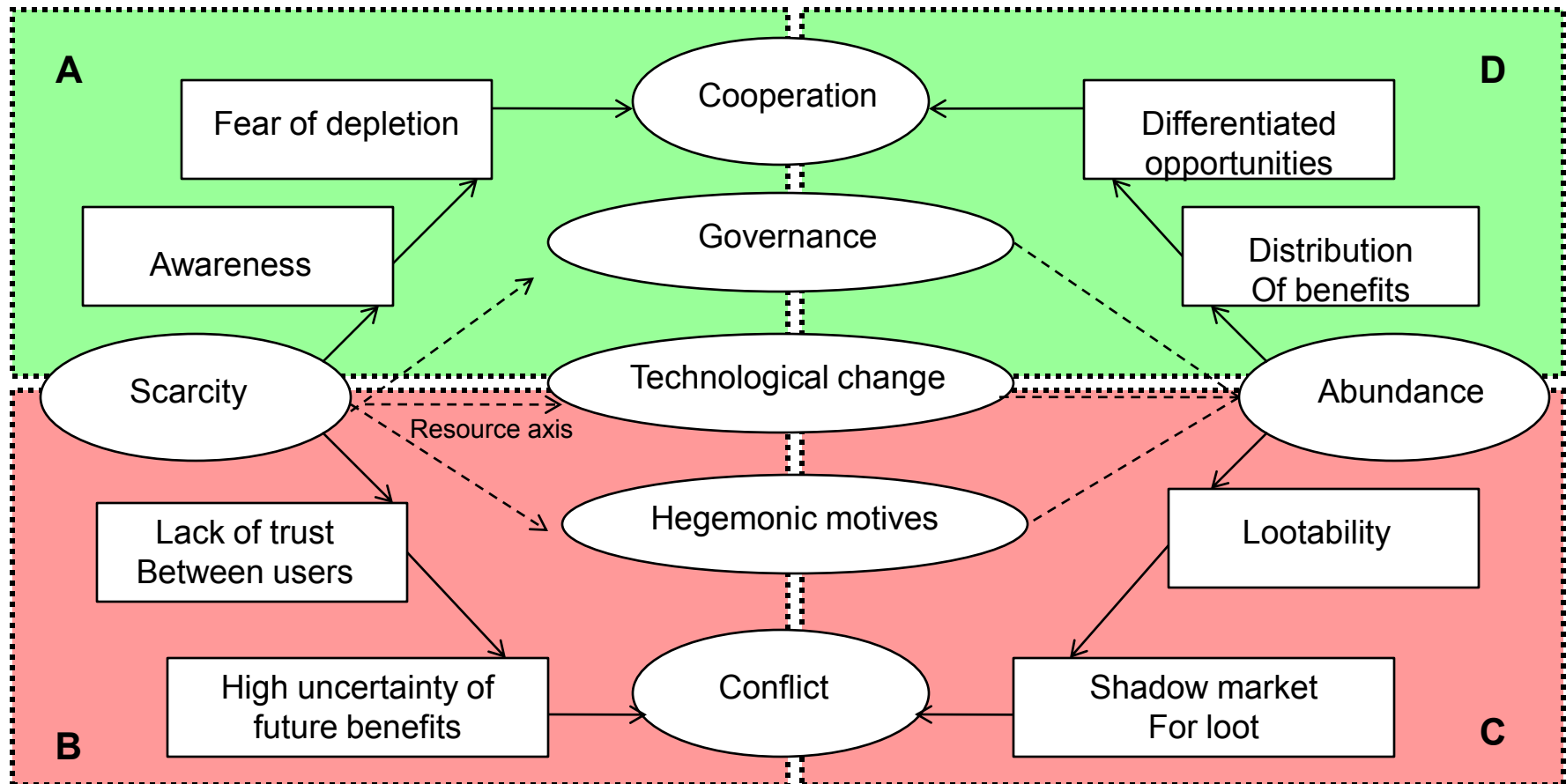
Source: Sakeen H. Ali, Introductory Chapter entitled *A Natural Connection between Ecology and Peace?* available at http://mitpress.mit.edu/books/chapters/0262511983intro1.pdf, 2007

Environment as a Peacebuilding Tool
## Promoting Regional Cooperation/Engagement

UNEP Report: *From Conflict to Peacebuilding*

Natural resources and the environment can be involved in all phase of the conflict cycle … cooperation over management of natural resources is investment in conflict prevention … provides new opportunities for peacebuilding
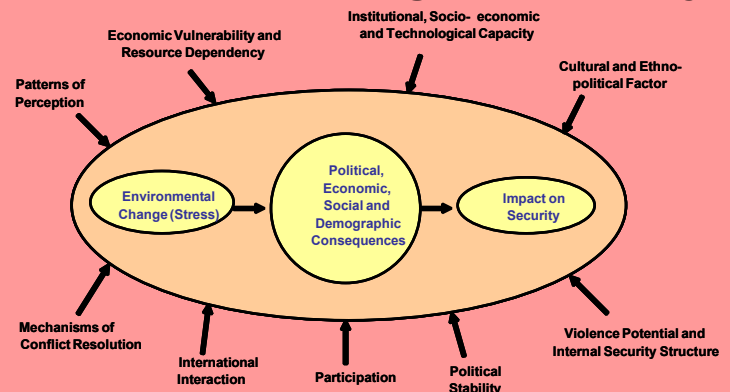
Source: http://www.unep.org/publications/search/pub_details_s.asp?ID=3998

Homer-Dixon Causal Model
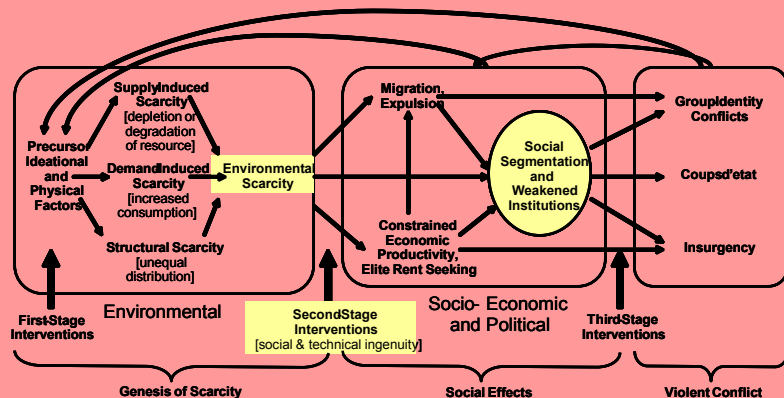
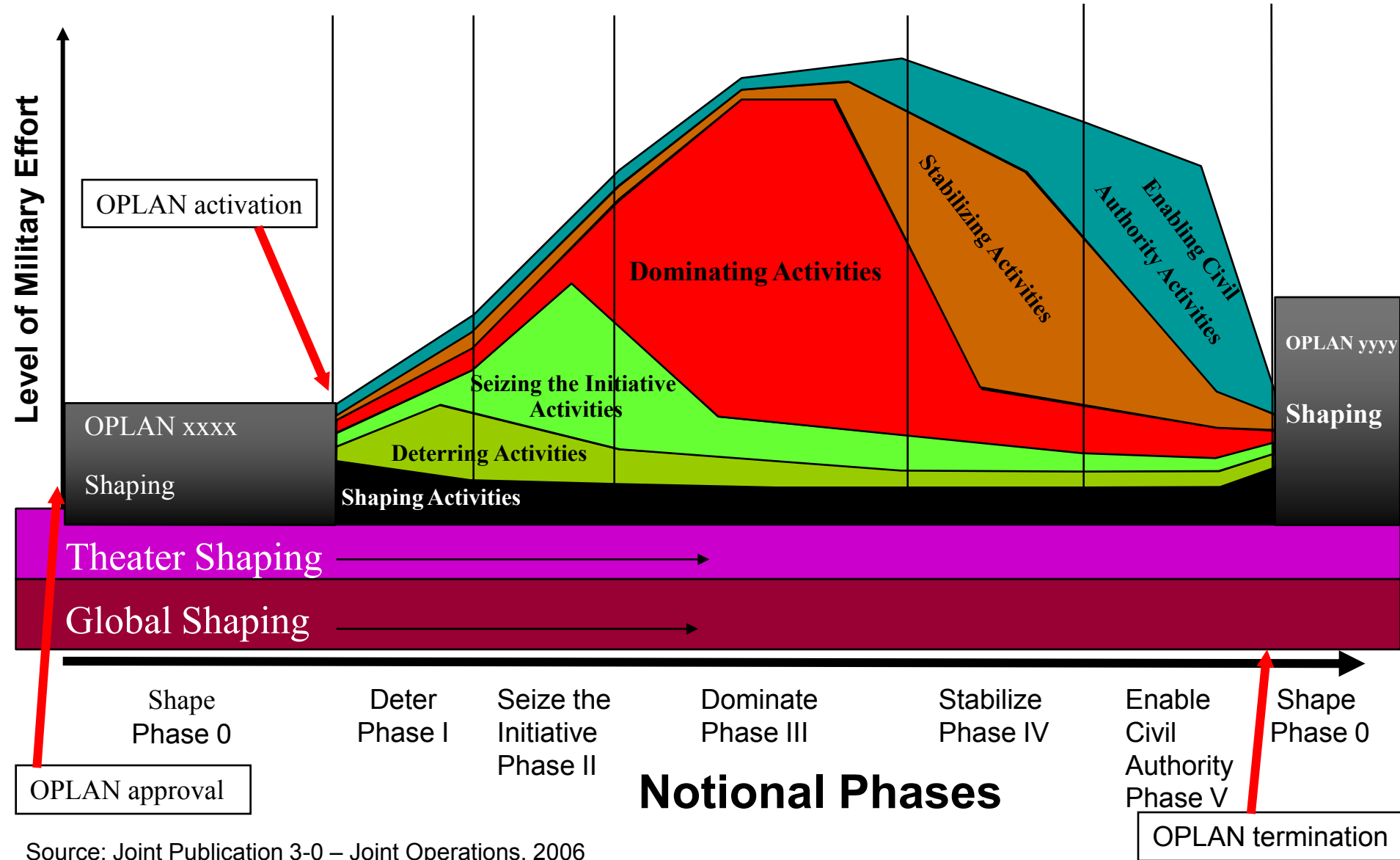Source: Adapted from Homer Dixon, Environment, Scarcity, and Violence, 1999

NATO: Env. Change & Security

Source: NATO CCMS Final Report No. 232, 1999

Six-Phase Planning Construct (Phase 0 to V)
Importance of "**Phase 0**" – Shaping/Engagement

Level of Military Effort

OPLAN activation

OPLAN xxxx

Shaping

Dominating Activities

Stabilizing Activities

Enabling Civil Authority Activities

OPLAN yyyy

Shaping

Seizing the Initiative Activities

Deterring Activities

Shaping Activities

Theater Shaping

Global Shaping

OPLAN approval

OPLAN termination

| Shape Phase 0 | Deter Phase I | Seize the Initiative Phase II | Dominate Phase III | Stabilize Phase IV | Enable Civil Authority Phase V | Shape Phase 0 |

Notional Phases

Source: Joint Publication 3-0 – Joint Operations, 2006

Proactive "Phase 0" Engagement
Environmental/Sustainability Initiatives

- ➢ Provide a non-threatening and constructive avenue for mil-to-mil and other engagement activities

- ➢ Environmental and Sustainability activities help to build stable and secure societies

- ➢ Military sponsored environmental and sustainability-related activities build important relationships between the military and civil society – increasing military legitimacy and credibility

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AEPI Website: **www.aepi.army.mil**

AEPI
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